



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

C45-4-4

Job Sheet 191803



Part No: C45-4-4

Job Qty: 4 pcs

Part Name: Load Beam



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 3/8/19

Job Tracking No:

Due Date: 3/29/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG C45-4-4A REV 20 IPP REV A 18.02.13 NEW ISSUE FK VERIFY DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Waterjet - Omax - 1	4 pcs	3/29/19	3/29/19	0.08	0.67	Waterjet - Omax		2019/03/20
120	NV5000 - 1 - B4B	4 pcs	3/29/19	3/29/19	0.00	2.00	NV5000 - 1 - B4B		J.C.L.
							NV5000 - 2 - B4B		
125	Outsource 145	4 pcs	3/29/19	3/29/19			ARR002 VU	15	
130	QC 2	4 pcs	3/29/19	3/29/19	0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		J.C.L. 19-04-08
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 54		
							QC 2 - 56		
							QC 2 - 57		
							QC 2 - 62		

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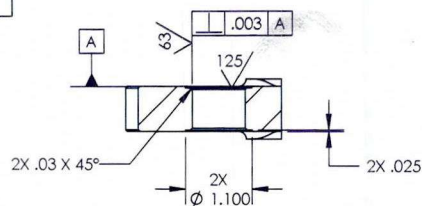
				QC 2 - 63	
				QC 2 - 8	
				QC 2 - 66	
				QC 2 - 64	
				QC 2 - 65	
140	QC 6 QC 8	4 pcs	3/29/19	0.00 0.00	QC 6 - 42 QC 8-8 QC 6 - 9 QC 6 - 68 QC 6 - 61 B.P. 19-05-04
150	Outsource - 1 - Heat Treat	4 pcs	3/29/19		ATL002-VC 5 HA 2019-05-08
152	Outsource - 15 - Nickel Plate	4 pcs	3/29/19		ORO002-VC 10
160	Packaging 2-1 - Receive - B4B	4 pcs	3/29/19	0.00 0.00	Packaging 2 - 1 - B4B Packaging 2 - 2 - B4B Packaging 2 - 3 - B4B Packaging 2 - 5 - B4B Packaging 2 - 4 - B4B Packaging 2 - 6 - B4B Packaging 2 - 7 - B4B Packaging 2 - 8 - B4B Packaging 2 - 9 - B4B Packaging 2 - 10 - B4B Packaging 2 - 11 - B4B Packaging 2 - 12 - B4B Packaging 2 - 13 - B4B Packaging 2 - 14 - B4B Packaging 2 - 15 - B4B Packaging 2 - 16 - B4B Packaging 2 - 17 - B4B Packaging 2 - 18 - B4B Packaging 2 - 19 - B4B Packaging 2 - 20 - B4B Packaging 2 - 21 - B4B Packaging 2 - 22 - B4B Packaging 2 - 23 - B4B Packaging 2 - 24 - B4B Packaging 2 - 25 - B4B Packaging 2 - 26 - B4B Packaging 2 - 27 - B4B Packaging 2 - 28 - B4B Packaging 2 - 29 - B4B Packaging 2 - 30 - B4B Packaging 2 - 31 - B4B Packaging 2 - 32 - B4B Packaging 2 - 33 - B4B Packaging 2 - 34 - B4B Packaging 2 - 35 - B4B Packaging 2 - 36 - B4B D.P. MAY 17 2019
170	QC 6	4 pcs	3/29/19	0.00 0.00	QC 6 - 42 QC 6 - 9 QC 6 - 68 QC 6 - 61 DAS 40 9-89 MAY 21 2019
180	Packaging 3-2 - Stock - B4B	4 pcs	3/29/19	0.00 0.00	Packaging 3 - 1 - B4B Packaging 3 - 2 - B4B Packaging 3 - 3 - B4B Packaging 3 - 4 - B4B Packaging 3 - 5 - B4B Packaging 3 - 6 - B4B Packaging 3 - 7 - B4B Packaging 3 - 8 - B4B DAS 28 9-89

				Packaging 3 - 9 - B4B			
				Packaging 3 - 10 - B4B			
				Packaging 3 - 11 - B4B			
				Packaging 3 - 12 - B4B			
				Packaging 3 - 13 - B4B			
				Packaging 3 - 14 - B4B			
				Packaging 3 - 15 - B4B			
				Packaging 3 - 16 - B4B			
				Packaging 3 - 17 - B4B			
				Packaging 3 - 18 - B4B			
				Packaging 3 - 19 - B4B			
				Packaging 3 - 20 - B4B			
				Packaging 3 - 21 - B4B			
				Packaging 3 - 22 - B4B			
				Packaging 3 - 23 - B4B			
				Packaging 3 - 24 - B4B			
				Packaging 3 - 25 - B4B			
				Packaging 3 - 26 - B4B			
				Packaging 3 - 27 - B4B			
				Packaging 3 - 28 - B4B			
				Packaging 3 - 29 - B4B			
				Packaging 3 - 30 - B4B			
				Packaging 3 - 31 - B4B			
				Packaging 3 - 32 - B4B			
				Packaging 3 - 33 - B4B			
				Packaging 3 - 34 - B4B			
				Packaging 3 - 35 - B4B			
				Packaging 3 - 36 - B4B			
190 QC 21 - SA	4 pcs	3/29/19	0.00 0.00	QC 21 - SA - 21	DAS		
				QC 21 - SA - 70	21		
				QC 21 - SA - 53	9-55 MAY 23 2019		
Part Op 100 - 1-Cut C45-4-4 blank (CANAM FOLDER) Dwg Rev: <u>20</u> Prog Rev: <u>20</u> 2-Deburr if necessary Descriptions: 120 - (MORI SEIKI VERTICAL MACHINE #1) 1-Machine as per folio FB888 FOLIO REV: <u>A4</u> DWG REV: <u>20</u> 2-Deburr ***MACHINE ENGRAVE AS PER DWG*** 130 - (QC2- Inspect parts off machine FAI/FAIB) 140 - (QC6- All purchased or subcontracted products) 150 - (Outsource process - Heat Treat) 1-Issue P/O to Atlantic Heat Treat; P/O _____ RC 53-56 2-Bead blast 3- Certificate of Conformity is required 152 - 1-Issue P/O to Groupe Altech; P/O _____ 2-Nickel Plate 3-Certificate of Conformity is required 160 - (Receive & Inspect for Damage & Mat'l Certs) 170 - (QC6- All purchased or subcontracted products) 180 - Identify as per dwg & Stock Location: _____ 190 - (QC21- Final Inspection - Work Order Release)							
Job BOM							
Part / Item	Component Name	Quantity	Operation	Container			
MT-4140-S-1.250X11.000	AISI 4140 Steel Sheet/Plate	2 ft (.5 ea)	100-Waterjet - Omax - 1	S052074			
Job Allocations							
Operation	Component Part	Required	Inventory	Allocated			
100-Waterjet - Omax - 1	MT-4140-S-1.250X11.000	2	10	0			
Part Specifications							
Specifications could not be found.							

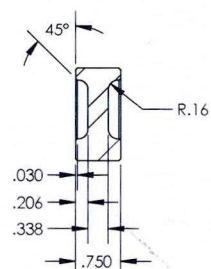
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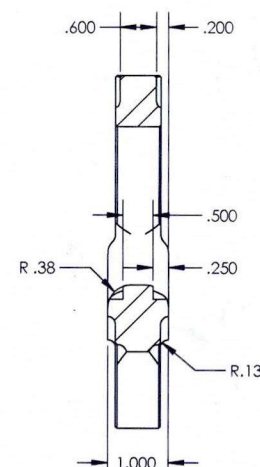
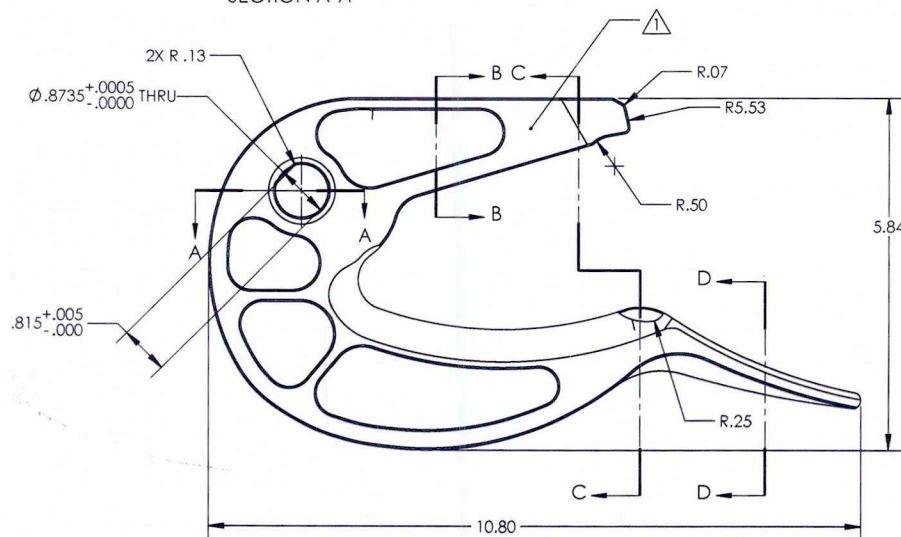
REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
15		AS DRAWN BY CANAM.	11/17/2009	
16		INCREASED HOLE FROM $\phi .750$ TO $\phi .8735$, AND ADDED FLAT.	9/12/2012	JAG
18	14-0126	C45-4-4 ADDED MACHINE ENGRAVE NOTE.	8/13/2014	DPD
19	15-0099	C45-4-4 DELETED DIMS 2.95, 2.05, 1.43, 1.13, .97, .94, .56, .57, 1.47, .333, R.31, R.50, R.50, R.38, R.38.	7/27/2015	DPD



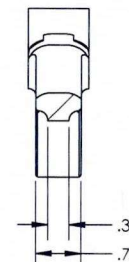
SECTION A-A



SECTION B-B
TYP 4 PLCS



SECTION C-C



SECTION D-D

NOTES:

1. MACHINE ENGRAVE BATCH NUMBER.
2. USE DXF PROFILE FOR PART CONTOURS.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO CHANGE
WITH
WORK
NO. 191803 HCS
19-03-08

C45-4-4
LOAD BEAM

		TITLE	
		C45 LOAD BEAM ASSEMBLIES	
DWG NO.		REV	
C45-4-4A / C45-4-4KA		20	
MATERIAL 4140/4142		UNLESS OTHERWISE SPECIFIED	
FINISH RC 53-56		DIMENSIONS ARE IN INCHES	
FINISH SEE SHEET 1		XXX ± .005 FRACTIONS ± 1/8	
		XX ± .01 ANGLES ± 5°	
		X ± .1 SURFACES ± 125	
DRAWN BY: GILBERT		1. BREAK ALL SHARP EDGES	
CHECKED: DD 06/05/2017		.015 X 45° OR .015R	
ORPS APPR: AA 06/05/2017		2. DIMENSIONAL LIMITS APPLY	
QA APPR: JL 06/14/2017		AFTER PLATING	
APPROVED: JAG 06/15/2017		3. INTERPRET DIM AND TOL PER	
		ASME Y14.5M-2009	
		USED ON MODEL	
SCALE	1:2	DATE	9/12/2012
		SHEET 4 OF 6	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Container No: S164557



Part: C45-4-4

Job No: 191803

Serial No/Batch: S164557

Revision: 20

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 03/20/19



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB043406



Supplier: ATL002-VC
Atlantic Heat Treat 2001
401 Frankcom
Ajax
ON
L1S 1R4 Canada
Phone: 866 257 6395

Attention: Ananth, Nimmy

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB043406

PO Date: 5/8/19

Due Date: 5/14/19

**Purchase Order
Revision:**

Revision Date:

Ship-To Contact: Phone:

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	194550	4.5NR-7	Lifter Bushing 1-Issue P/O; RC 40-44 2-Bead blast 3-Material type; 4140 4- Certificate of Conformity is required	Firmed	-	5/14/19	36 pcs	0 pcs	36 pcs	\$2.0833/pcs	\$75.00
			36 inches IPC5 = 36 X MAY 16 2019								
2	193435	C45-12-4	Lock Roller Outsource process - Heat Treat) 1-Issue P/O to Atlantic; P/O RC 53-56 2-Bead blast 3- Certificate of Conformity is required 4. Material MT-4140QT- R1.000 AISI 4140 Quenched & Tempered Steel Round Bar 1.000" dia	Firmed	-	5/14/19	50 pcs	0 pcs	50 pcs	\$1.50/pcs	\$75.00
			X50				MAY 17 2019			DP	
3	191803	C45-4-4	Load Beam (Outsource process - Heat Treat) 1-Issue P/O to Atlantic Heat Treat; P/O RC 53-56 2-Bead blast 3- Certificate of Conformity is required 4. Material MT-4140-S- 1.250X11.000 AISI 4140 Steel Sheet/Plate	Firmed	-	5/14/19	7 pcs	0 pcs	7 pcs	\$24.2857/pcs	\$170.00
			X 7				MAY 17 2019			DP	

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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB043406



Items										
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)
Grand Total:										Extended Price
										\$320.00

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

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Shipping Ticket

Sold To: 1448
DART AEROSPACE LTD.
1270 ABERDEEN ST

HAWKESBURY ON K6A 1K7

Ship To: 163147
DART AEROSPACE LTD.
1270 ABERDEEN ST

HAWKESBURY ON K6A 1K7

Page 1 of 1

Purchase Order Number	Packing List No	Customer Job No	Route	Carrier
POHB043406				

Quantity	Part No. / Part Name / Part Description	Pounds
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7 PCS MATERIAL 4140
ANNEAL AND HEAT TREAT TO 53-S56RC
SANDBLAST, C OF C, PRT# C45-4-4, JOB# 191803

Container Type	# Of Containers	Cust Cont Id	Container Type	# Of Containers	Cust Cont Id
BOX	1				

NOTICE: OUR LIABILITY IS LIMITED TO OUR INVOICE CHARGES ONLY

Shipped Complete

Quantity Shipped:

7

Pounds Shipped:

34.00

56 RC

5-16-19

Order No.: 166212

Shipped Complete

Quantity Shipped:

7.00

Received By:

Date:

Pounds Shipped:

34.00

Sold To: DART AEROSPACE LTD.

Shipped ON: 05/13/2019

Certification

Date: 05/16/2019

Entry Date: 05/13/2019

Page: 1 of 1

To:DART AEROSPACE LTD.
1270 ABERDEEN ST

Purchase Order No.: POHB043406

Packing List No.:

HAWKESBURY ON K6A 1K7

Material: 4140

We are pleased to provide you with the following Certificate of Compliance.

Quantity	Part Number / Part Name / Part Description	Pounds
7	7 PCS MATERIAL 4140 ANNEAL AND HEAT TREAT TO 53-S56RC SANDBLAST, C OF C, PRT# C45-4-4, JOB# 191803	34

Insp. Type	Scale	Minimum	Maximum	Number	Other
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Customer Requirements:

Harden rockwell

Results:

Harden ROCKWE 53. 56. 56. TESTED AS PER SAMPLING PLAN
HEAT TREATED TO 56 RC AS PER CUSTOMER REQUEST

STATEMENT OF LIMITED LIABILITY (PLEASE READ CAREFULLY). ALL WORK IS ACCEPTED SUBJECT TO THE FOLLOWING CONDITIONS: It is recognized that even after employing all the scientific methods known to us, hazards still remain in metal treating. THEREFORE, OUR LIABILITY SHALL NOT EXCEED TWICE THE AMOUNT OF OUR CHARGES FOR THE WORK DONE ON ANY MATERIAL (FIRST TO REIMBURSE FOR THE CHARGES AND SECOND TO COMPENSATE IN THE AMOUNT OF THE CHARGES), EXCEPT BY WRITTEN AGREEMENT SIGNED BY THE METAL TREATER. THE CUSTOMER, BY CONTRACTING FOR METAL TREATMENT, AGREES TO ACCEPT THE LIMITS OF LIABILITY AS EXPRESSED IN THIS STATEMENT TO THE EXCLUSION OF ANY AND ALL PROVISIONS AS TO LIABILITY ON THE CUSTOMER'S OWN INVOICES, PURCHASE ORDERS OR OTHER DOCUMENTS. IF THE CUSTOMER DESIRES HIS OWN PROVISIONS AS TO LIABILITY TO REMAIN IN FORCE AND EFFECT, THIS MUST BE AGREED TO IN WRITING, SIGNED BY AN OFFICER OF THE TREATER. IN SUCH EVENT, A DIFFERENT CHARGE FOR OUR SERVICES REFLECTING THE HIGHER RISK TO TREATER, SHALL BE DETERMINED BY THE TREATER AND CUSTOMER. THE TREATER MAKES NO EXPRESS OR IMPLIED WARRANTIES AND SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF THE FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, AS TO THE PERFORMANCE OF CAPABILITIES OF THE MATERIAL AS HEAT TREATED, OR THE HEAT TREATMENT. THE FOREMENTIONED LIMITATION OF LIABILITY STATED ABOVE IS SPECIFICALLY IN LIEU OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS, AND OF ANY OTHER SUCH OBLIGATION ON THE PART OF THE TREATER. No claim for shortage in weight or count will be entertained unless presented within five (5) working days after receipt of materials by customer. No claim will be allowed for shrinkage, expansion, deformity, or rupture of material in treating or straightening, except by prior written agreement, as above, nor in any case for rupture caused by or occurring during subsequent grinding. Whenever we are given material with detailed instructions as to treatment, our responsibility shall end with the carrying out of those instructions. Failure by a customer to indicate plainly and correctly the kind of material (i.e., proper alloy designation) to be treated, shall cause an extra charge to be made to cover any additional expense incurred as a result thereof, but shall not change the limitation of liability stated above. Customer agrees there will be no liability on the treater in contract for any special, indirect or consequential damages arising whatsoever, including but not limited to personal injury, property damage, loss of profits, loss of production, recall or any other losses, expenses or liabilities allegedly occasioned by the work performed on the part of the treater. It shall be the duty of the customer to inspect the merchandise immediately upon its return, and in any event claims must be reported prior to the time that any further processing, assembling or any other work undertaken. OUR LIABILITY TO OUR CUSTOMERS SHALL CEASE ONCE ANY FURTHER PROCESSING, ASSEMBLING OR ANY OTHER WORK HAS BEEN UNDERTAKEN ON SAID MATERIAL. No agent or representative is authorized to alter the above conditions, except by writing duly signed by an officer of treater.

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KEAN SHEPHERD
QUALITY CONTROL
ATLANTIC HEAT TREATING 2001 LTD